Image-Based CAPTCHAs for Website Security

ID# 2005-3125

Imaged-based CAPTCHA example

Technology Summary

A system for the generation of attack-resistant, user-friendly, image-based CAPTCHAs. Controlled distortions are produced on randomly chosen images and present them to the user in the form of a mosaic. The images are distorted in a way that precludes the use of state-of-the-art computer image recognition technologies. In a preferred implementation of our technology, we use a two step verification process. In the first step, the user clicks near the center of any picture in the mosaic. In the second step, the user is asked to identify a distorted image by selection from a list. This two-round click-and-annotate process makes the CAPTCHA user friendly and very effective.

Application & Market Utility

Most current CAPTCHAs are text-based, however text-based CAPTCHAs are increasingly being broken into by using automated computers using object-recognition techniques with high accuracies. This tehnology counters this method with a simple click-based system with no typing necessary and no hard to read text generated.

Next Steps

Seeking research collaboration and licensing opportunities.

TECHNOLOGY READINESS LEVEL 4-7

Seeking

Investment | Licensing | Research

Keywords

- CAPTCHAs
- Web security
- Internet authentication
- automated Turing test
- image retrieval

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